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In The
Supreme Court of the United States

STATE OF MICHIGAN, *et al.*,
Petitioners,
v.
ENVIRONMENTAL PROTECTION AGENCY, *et al.*,
Respondents.

UTILITY AIR REGULATORY GROUP,
Petitioner,
v.
ENVIRONMENTAL PROTECTION AGENCY, *et al.*,
Respondents.

NATIONAL MINING ASSOCIATION,
Petitioner,
v.
ENVIRONMENTAL PROTECTION AGENCY, *et al.*,
Respondents.

On Writs Of Certiorari To The United States Court Of Appeals For The District Of Columbia Circuit

BRIEF OF THE INSTITUTE FOR POLICY INTEGRITY AT NEW YORK UNIVERSITY SCHOOL OF LAW AS *AMICUS CURIAE* IN SUPPORT OF RESPONDENTS

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QUESTION PRESENTED

Whether the Environmental Protection Agency unreasonably refused to consider costs in determining whether it is appropriate to regulate hazardous air pollutants emitted by electric utilities.

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INTEREST OF THE AMICUS CURIAE[1]

The Institute for Policy Integrity at New York University School of Law[2] ("Policy Integrity") is dedicated to improving the quality of government decisionmaking through advocacy and scholarship in administrative law, economics, and public policy. Policy Integrity is a collaborative effort of faculty; a full-time staff of attorneys, economists, and policy experts; and law students.[3]

Policy Integrity has produced extensive scholarship on Clean Air Act regulation and regulatory impact analysis. An area of special concern for Policy Integrity is the promulgation of federal environmental regulations justified by cost-benefit analysis. Policy Integrity has specific expertise in the proper scope and estimation of costs and benefits, and the application of economic analysis to regulatory decisionmaking. The question presented directly bears on these issues. Therefore, Policy Integrity has a significant interest in the outcome of this case—particularly in supporting the proper application of cost-benefit analysis in rulemakings, and in protecting the Environmental

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[1] The parties have submitted letters to the Clerk granting blanket consent to the filing of amicus briefs. No counsel for any party authored this brief in whole or in part, and no person or entity other than amicus and its counsel made a monetary contribution intended to fund the preparation or submission of this brief.

[2] No part of this brief purports to present New York University School of Law's views, if any.

[3] Policy Integrity runs New York University School of Law's Regulatory Policy Clinic, and thanks four clinic students for assisting with the brief: Daniel Cheung, Cerin Lindgrensavage, Hilary Nakasone, and Alec Webley.

Protection Agency's reasonable interpretations of the Clean Air Act's requirements.

SUMMARY OF THE ARGUMENT

The Mercury and Air Toxics Standards (the Rule) is massively cost-benefit justified, delivering tens of billions of dollars in net benefits each year, including thousands of lives saved annually plus other significant health and environmental improvements. Petitioners and their amici falsely portray EPA and the Rule as irrationally and recklessly bent on decimating the electricity sector for the sake of miniscule benefits and without any attention to regulatory costs. That portrayal is false for at least three reasons. First, the Rule's net benefits are real and extremely substantial. Second, the Rule and its impact analysis were thoroughly vetted by the executive branch regulatory review process. Third, EPA did weigh the Rule's costs when calibrating regulatory stringency under Section 112(d) of the Clean Air Act; assessing costs any earlier in the regulatory process, such as upon listing power plants under Section 112(n)(1)(A), both is not statutorily required and could be grossly misleading. The Rule reflects EPA's rational consideration of costs and benefits during the appropriate phase of the rulemaking process, consistent with statutory design, federal executive orders, case law, longstanding regulatory precedents, and analytical best practices.

Reducing hazardous emissions from coal- and oil-fired power plants necessarily also reduces particulate matter—a complex mixture of both hazardous pollutants listed under Section 112 and other dangerous chemicals. Congress anticipated the reduction of co-pollutants under Section 112 and contemplated that EPA would assess such indirect

benefits when setting emissions standards. EPA has consistently done exactly that, weighing indirect benefits in air pollution rules issued by presidential administrations of both parties over the last several decades. In fact, under executive orders, in any regulatory impact analysis, agencies must assess indirect benefits with the same degree of attention given to all other significant costs and benefits. Even Petitioners would have EPA count indirect costs that support their arguments; yet there is no legal, economic, or logical reason to treat indirect benefits any differently than other significant regulatory effects. When all direct and indirect effects are quantified, this Rule's monetized benefits range from $37–$90 billion per year, substantially outweighing the $9.7 billion in costs. These impressive monetized benefits result from this Rule alone, and are not, as Petitioners and amici imply, simply artifacts of past air quality standards. EPA's quantification of this Rule's unique benefits stands solidly on a foundation of best practices for epidemiology and economics. Beyond the billions in monetized benefits, federal guidelines and historical practices also support EPA's consideration of all significant unquantified benefits, such as mercury's neurologic, genotoxic, immunotoxic, and cardiovascular effects. The Rule's benefits are both real and considerable.

The Office of Information and Regulatory Affairs (OIRA)'s approval of the Rule confirms that EPA considered costs and benefits in a reasonable manner. Executive branch agencies, including EPA, must submit all significant rules to OIRA along with regulatory impact analyses. OIRA reviewed and approved this Rule and its regulatory impact analysis, including the treatment of the Rule's substantial indirect and unquantified benefits. This

positive executive branch review undermines Petitioners' claims that the Rule's costs exceed its benefits, and instead demonstrates that EPA followed standard best practices in its economic analysis.

Finally, there is no debate that EPA did, in fact, consider costs when setting the Rule's stringency under Section 112(d); the only question is whether EPA was also required to consider costs much earlier, when deciding whether it is "appropriate and necessary" to list power plants as a category under Section 112(n)(1)(A). EPA's choice not to base its listing decision on costs warrants deference due to statutory silence and ambiguity alone, but in this case, the agency deserves additional deference. First, this Court should grant EPA particular deference on interpreting the criteria for listing decisions, because Congress explicitly balanced cost considerations against air quality goals when it prescribed the criteria for setting regulatory stringency under Section 112(d). Second, for at least two decades, EPA has consistently interpreted category-listing decisions under the Clean Air Act as not requiring the consideration of costs. And third, many cost-determinative choices between regulatory alternatives could not be made at the time of EPA's "appropriate and necessary" finding, since the authority for such decisions is found outside Section 112(n)(1)(A). Costs may decrease or increase significantly as EPA chooses the regulation's scope, stringency, design, flexibility, timeline, and approach toward different industry segments. Prematurely assessing costs at the listing phase, therefore, could be deeply misleading or even impossible.

ARGUMENT

I. THE MERCURY AND AIR TOXICS STANDARDS GENERATE SUBSTANTIAL INDIRECT AND UNQUANTIFIED BENEFITS THAT MUST BE CONSIDERED AS PART OF THE RULE'S OVERALL IMPACT

The Rule's monetized benefits of $37–$90 billion per year in health protections, lives saved, and environmental improvements outweigh, by as much as nine to one, its $9.6 billion in costs. EPA, *Regulatory Impact Analysis for the Final Mercury and Air Toxics Standards* ES-2 (2011) [hereinafter "MATS RIA"]. Additional and substantial unquantified health and environmental gains further bolster the Rule's strong economic justification. Yet Petitioners and their amici argue that EPA's cost-benefit analysis should ignore the unquantified benefits of reducing hazardous air pollutants, as well as the Rule's indirect benefits from reductions of co-pollutants such as particulate matter and sulfur dioxide.[4] *E.g.*, Chamber of Commerce Amicus Br. at 17–18; State Pet'rs Br. at 47-48. While EPA reasonably chose not to base its "appropriate and necessary" determination on cost-benefit analysis, *see* Section IV, *infra*, the Agency acted consistently with federal guidelines, case law, and best practices by assessing all significant economic impacts—both

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[4] Particulate matter is a complex mixture of diverse components, including both hazardous air pollutants listed under Section 112(b) and other harmful chemicals. At least some of the billions of dollars' worth of particulate matter-related benefits, then, are directly attributable to hazardous pollutant reductions. *See* Indust. Resp'ts Br. at 35; Non-Gov't Resp'ts Br. at 13. Regardless, all the Rule's direct and indirect benefits deserve consideration.

direct and indirect, quantified and unquantified—in its regulatory impact analysis.

A. Regulatory Cost-Benefit Analysis Must Include Indirect Benefits

1. Executive orders and best practices for federal agencies strongly support the inclusion of indirect effects

To accurately evaluate the costs and benefits of significant rules, as required by executive orders, federal agencies must consider not only direct effects, but also all important indirect benefits (sometimes called ancillary benefits or co-benefits) as well as indirect costs (sometimes called countervailing risks).

Federal agencies are required to take indirect benefits into account. The executive orders governing regulatory review call for agencies to accurately measure the "actual results of regulatory requirements" and explicitly require analysis of both direct and indirect costs and benefits. Exec. Order No. 13,563 § 1, 76 Fed. Reg. 3821, 3821 (Jan. 21, 2011) (affirming Exec. Order No. 12,866); *accord.* Exec. Order No. 12,866 § 6(a)(3)(C), 58 Fed. Reg. 51,735, 51,741 (Oct. 4, 1993) (detailing the requirements for cost-benefit analysis). The executive orders treat indirect benefits in parity with indirect costs.

The Office of Management and Budget under President George W Bush issued Circular A-4, to "standardiz[e] the way benefits and costs of Federal regulatory actions are measured." Office of Mgmt. & Budget, *Circular A-4* at 1 (2003) [hereinafter "Circular A-4"]. The Circular instructs agencies to consider "any important" indirect benefits, which includes any "favorable impact secondary to the

statutory purpose of the rulemaking," and recommends that agencies use the "same standards" for assessing indirect and direct benefits. *Id.* at 26.

EPA's own cost-benefit guidelines, adopted after extensive peer review, likewise instruct the agency to assess "all identifiable costs and benefits," including both direct effects "as well as ancillary [indirect] benefits and costs." EPA, *Guidelines for Preparing Economic Analyses* at 11-2 (2010). The assessment of both direct and indirect effects is needed to "inform decision making" and allow meaningful comparisons between policy alternatives. *Id.* at 7-1.

Moreover, EPA—under presidents of both parties and across four decades—has consistently taken indirect benefits into account when evaluating Clean Air Act regulations. For example, when proposing to develop New Source Performance Standards for municipal waste combustors, EPA under President Reagan explained that it intended to "consider the full spectrum of the potential impacts of regulation," including "indirect benefits accruing from concomitant reductions in other regulated pollutants." 52 Fed. Reg. 25,399, 25,406 (July 7, 1987). Similarly, in proposing performance standards for landfill gases, EPA under President George H.W. Bush justified the regulation partly on "the ancillary benefit of reducing global loadings of methane." 56 Fed. Reg. 24,468, 24,469 (May 30, 1991). EPA under President Clinton analyzed the indirect benefits of reducing co-pollutants like volatile organic compounds, particulate matter, and carbon monoxide from emissions standards addressing hazardous pollutants from pulp and paper producers. 63 Fed. Reg. 18,504, 18,585–86 (Apr. 15, 1998). In promulgating a rule on mobile source air toxics, EPA

under President George W. Bush noted. "Although ozone and $PM_{2.5}$ are considered criteria pollutants rather than 'air toxics,' reductions in ozone and $PM_{2.5}$ are nevertheless important co-benefits of this proposal." 72 Fed. Reg. 8428, 8430 (Feb. 26, 2007). Finally, EPA under President Obama considered the indirect benefits from reducing carbon monoxide, volatile organic compounds, and nitrogen oxides in its analysis of regulating hazardous air pollutants from combustion engines. 75 Fed. Reg. 51,570. 51,578 (Aug. 20, 2010).

Additionally, the legislative history of the 1990 Clean Air Act Amendments indicates that Congress specifically contemplated that "[w]hen establishing technology-based standards" to regulate hazardous air pollutants under Section 112(d), EPA would "consider the benefits which result from control of air pollutants that are not listed but the emissions of which are, nevertheless, reduced by control technologies or practices necessary to meet the prescribed limitation." S. Rep. No. 101-228, at 172 (1989). Congress noted that these "other compounds, although not listed [under Section 112], would be precursors of ozone pollution," and their "control, even in attainment areas, may produce substantial health and environmental benefits." *Id.* Congress thus anticipated what would become EPA's standard practice of considering indirect benefits, including the substantial health gains from reducing co-pollutants, when regulating under Section 112.

2. *Courts require agencies to account for the indirect consequences of regulation*

When agencies choose or are required to justify rules by a cost-benefit analysis, courts have repeatedly instructed agencies to consider indirect

effects. *See* Samuel J. Rascoff & Richard L. Revesz, *The Biases of Risk Tradeoff Analysis: Towards Parity in Environmental and Health-and-Safety Regulation*, 69 U. Chi. L. Rev. 1763, 1772–80 (2002). And EPA has specifically been required to consider indirect effects when evaluating a rule under the Clean Air Act. *Am. Trucking Ass'ns v. EPA*, 175 F.3d 1027, 1051–52 (D.C. Cir. 1999) (holding that EPA's consideration must include both the direct and indirect effects of pollutants, rather than only "half of a substance's health effects"), *rev'd on other grounds sub nom. Whitman v. Am. Trucking Ass'ns, Inc.*, 531 U.S. 457 (2001); *see also Corrosion Proof Fittings v. EPA*, 947 F.2d 1201, 1225 (5th Cir. 1991) (holding that EPA must consider the indirect safety effects of substitute options for car brakes when banning asbestos-based brakes under the Toxic Substances Control Act).

Other agencies face similar requirements. A National Highway Traffic Safety Administration rule, for example, was struck down for failing to consider whether benefits from more fuel-efficient cars outweighed the potential increased safety risks because smaller, more efficient cars might be less protective in a crash. *Competitive Enterprise Inst. v. Nat'l Highway Traffic Safety Admin.*, 956 F.2d 321, 326-27 (D.C. Cir. 1992); *see also Am. Dental Ass'n v. Martin*, 984 F.2d 823, 826-27 (7th Cir. 1993) (remanding in part an Occupational Safety and Health Administration regulation for failure to consider indirect costs).

3. There is no reason agencies should treat indirect benefits differently than indirect costs

Petitioners and their amici urge EPA to consider all of the Rule's potential direct and indirect costs, such as less reliable electricity or job losses from plant closures, *e.g.*, Peabody Energy Amicus Br. at 3–4, 17, yet simultaneously and illogically seek to foreclose any consideration of the Rule's significant indirect benefits. Chamber of Commerce Amicus Br. at 21–22. There are at least three fatal problems with this argument. First, Petitioners and their amici fail to recognize that EPA has already accounted for indirect effects like job impacts and electricity reliability. MATS RIA at 3-14, 6-1. Moreover, their estimate of thousands of jobs lost annually, Peabody Energy Amicus Br. at 7, is inaccurate and misleading; EPA's own analysis more reasonably predicted minor and potentially positive employment effects. MATS RIA at 6A-11. *See generally* Michael A. Livermore & Jason A. Schwartz, *Analysis to Inform Public Discourse on Jobs and Regulation*, in *Does Regulation Kill Jobs?* 239 (Cary Coglianese et al. eds., 2013).

Second, Petitioners appear happy to count indirect benefits when they suit their argument, such as when Petitioners discuss the reductions of hazardous air pollutants that result indirectly from regulation of power plants under other Clean Air Act provisions. Pet'r Util. Air Regulatory Grp. Br. at 4–5. Though EPA's consistent approach to all indirect effects may be inconvenient for Petitioners' argument, it is well supported by principles of rational decisionmaking and analytical best practices.

Finally, no reason exists to include indirect costs but exclude indirect benefits, since the two "are simply mirror images of each other." Rascoff & Revesz, *supra*, at 1793. Agencies must treat costs and benefits alike, and may not "put a thumb on the scale by undervaluing the benefits and overvaluing the costs of more stringent standards." *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1198 (9th Cir. 2008). Under the executive orders on regulatory analysis, Circular A-4, and EPA's own guidelines, indirect benefits must be counted "equivalently" with other costs and benefits, in order to "offer a full accounting" of a rule. Cass R. Sunstein, *The Real World of Cost-Benefit Analysis: Thirty Six Questions (and Almost as Many Answers)*, 114 Colum. L. Rev. 167, 190 (2014). Moreover, there are "no legal, political, or intellectual impediments to treating ancillary benefits and countervailing risks equally in cost-benefit analysis." Christopher C. DeMuth & Douglas H. Ginsburg, *Rationalism in Regulation*, 108 Mich. L. Rev. 877, 888 (2010) (book review). Therefore, EPA properly included indirect benefits in the Rule's regulatory impact analysis.

B. Under Executive Orders and Best Practices for Cost-Benefit Analysis, Unquantified Benefits Must Also Be Taken into Account

Petitioners' focus on just $4–$6 million of the $37–$90 billion in annual, monetized benefits from the Rule not only fails to recognize indirect benefits, but also ignores the significant, unquantified benefits that agencies must consider. EPA projected that the Rule could result in "substantial" unquantified health, environmental, and economic

benefits from the reduction of hazardous pollutants,[5] such as preventing neurologic, cardiovascular, genotoxic, and immunologic damage to human health, reproductive damage to wildlife, and negative effects on commercial and recreational fishing yields due to mercury exposure. *See* MATS RIA at ES-9 to ES-13. EPA explained why data and methodological limitations prevented quantification of these important effects, *e.g.*, *id.* at 4-1; discussed uncertainty, *e.g.*, *id.* at 4-2; and exercised professional judgment to determine the relative magnitude of the Rule's unquantifiable benefits, *e.g.*, *id.* (concluding that mercury benefits were likely underestimated due to data limitations).

Including a complete assessment of the Rule's significant, unquantified benefits is consistent with federal guidelines and best practices. The executive orders governing the regulatory analysis instruct agencies to include unquantified costs and benefits. Exec. Order No. 13,563 § 1, 76 Fed. Reg. at 3821; Exec. Order No. 12,866 § 1, 58 Fed. Reg. at 51,735. Circular A-4 cautions agencies against ignoring the potential magnitude of unquantified benefits, because the most efficient rule may not have the "largest quantified and monetized estimate." Circular A-4 at 2. Furthermore, best practices for cost-benefit analysis require consideration of effects that "defy quantification but are thought to be important." Kenneth J. Arrow et al., *Benefit-Cost Analysis in Environmental, Health, and Safety*

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[5] Many significant benefits of co-pollutants such as particulate matter also could not be fully quantified. MATS RIA at ES-9 to ES-11. Again, particulate matter comprises at least some hazardous air pollutants, like non-mercury metals. *See supra* note 4.

Regulation: A Statement of Principles 8 (1996). In fact, over the last few decades, some of the most important categories of benefits of environmental regulation that were once considered unquantifiable were subsequently quantified. Richard L. Revesz, *Quantifying Environmental Benefits*, 102 Cal. L. Rev. 1423, 1436 (2014).

For the last twenty-five years, under presidents of both parties, EPA has consistently taken into account unquantified benefits when evaluating regulations. In response to criticism of its benzene regulations under Section 112, EPA under President George H.W. Bush "reject[ed] the position that only quantified information can be considered in the decisions." 55 Fed. Reg. 8292, 8302 (Mar. 7, 1990). EPA under the Clinton administration considered the "real, but unquantifiable benefits" of emissions standards for hazardous waste combustors. 64 Fed. Reg. 52,828, 53,023 (Sept. 30, 1999). EPA under President George W. Bush evaluated a rule restricting emissions from non-road diesel engines based on "consideration of all benefits and costs expected to result from the new standards, not just those benefits and costs which could be expressed here in dollar terms." 69 Fed. Reg. 38,958, 39,138 (June 29, 2004).

In short, consistent with regulatory guidance and longstanding agency practice under administrations of both parties, EPA correctly considered the Rule's substantial unquantified benefits.

II. EPA PROPERLY ASSESSED THE BENEFITS RESULTING FROM THE PARTICULATE MATTER REDUCTIONS ATTRIBUTABLE TO THE RULE

EPA followed economic best practices and public health science in its evaluation of the Rule's benefits resulting from particulate matter reductions. Petitioners and their amici cast unwarranted doubt on the particulate matter benefits attributed to the Rule by noting that EPA has separately regulated particulate matter, and by challenging the assumptions used in EPA's valuation of particulate matter benefits. *See, e.g.*, Chamber of Commerce Amicus Br. at 22–24. However, the particulate matter benefits that EPA assigns to the Rule flow directly from the Rule itself rather than from other rulemakings that may also reduce particulate matter. Further, reductions in particulate matter below the National Ambient Air Quality Standards (NAAQS) will, in fact, generate significant health benefits, and EPA correctly evaluated them.

A. The Benefits That EPA Attributes to the Rule Flow from That Rule, Not from Earlier Rulemakings, and Also Are Not Attributed to Later Rulemakings

The benefits that EPA assigns to particulate matter reductions in its regulatory impact analysis do, in fact, flow from the Rule. In accordance with best practices for cost-benefit analysis, EPA developed a baseline scenario projecting future air quality absent additional regulation to serve as a control against which to compare projected air quality under the Rule. MATS RIA at 1-11 to 1-12; Circular A-4 at 2 (instructing agencies to "[i]dentify a baseline" in order to "evaluate properly the benefits

and costs of regulations and their alternatives"). EPA's internal guidelines on economic analysis instruct staff to "develop baseline and policy scenarios that assume full compliance with existing and newly enacted (but not yet implemented) regulations," which "enables the analysis to focus on the incremental economic effects of the new rule or policy without double counting benefits and costs captured by analyses performed for other rules." EPA, *Guidelines for Preparing Economic Analyses*, *supra*, at 5-9. This is precisely what EPA did here. In particular, EPA developed a baseline that accounted for "the emissions reductions of SOx, NOx, directly emitted PM, and CO_2" from "federal rules, state rules and statutes, and other binding, enforceable commitments in place by December 2010," as well as "the Cross-State Air Pollution Rule (CSAPR) as finalized in July 2011." MATS RIA at 1-11.

Furthermore, in developing its baselines in subsequent rulemakings, EPA ensured that these later rules did not count benefits that had already been attributed to this Rule. In its regulatory impact analysis for a subsequent revision of the particulate matter NAAQS, EPA explained, "It is important to emphasize that the EPA does not 'double count' the costs or the benefits of our rules. Emission reductions achieved under rules that require specific actions from sources—such as MATS—are in the baseline of this NAAQS analysis, as are emission reductions needed to meet the current NAAQS." EPA, *Regulatory Impact Analysis for the Final Revisions to the National Ambient Air Quality Standards for Particulate Matter* at ES-18 (2012) [hereinafter "2012 PM NAAQS RIA"]; *see also* EPA, *Regulatory Impact Analysis for the Proposed Carbon Pollution Guidelines for Existing Power Plants and*

Emission Standards for Modified and Reconstructed Power Plants at 3-4 to 3-5 (2014) ("Base Case includes the Mercury and Air Toxics Rule "). Thus, any benefits claimed to result from subsequent regulations are due to the additional incremental pollutant reductions of those rules alone.

B. EPA Properly Assessed Benefits from Particulate Matter Reductions Beyond the National Ambient Air Quality Standards

In conducting a methodologically sound analysis, EPA properly valued the benefits resulting from a decrease in particulate matter, including reductions to levels below the National Ambient Air Quality Standards (NAAQS). Petitioners and their amici argue that EPA improperly counted benefits that result from reductions of particulate matter to levels below those required by the NAAQS. *E.g.*, Pet'r Nat'l Mining Ass'n Br. at 41 n.19. Such assertions wrongly treat the NAAQS as a level below which no benefits can be realized. In reality, health and welfare benefits continue to accrue for reductions of pollutants below the NAAQS, and EPA properly accounted for them in its regulatory impact analysis.

Under the Clean Air Act, EPA must set the NAAQS at a level "requisite to protect the public health" with "an adequate margin of safety." 42 U.S.C. § 7409(b)(1). This language does not require eliminating all health risks. *Whitman*, 531 U.S. at 494 (Breyer, J., concurring) (characterizing a zero-risk standard as "impossible and undesirable"); *see also* Michael A. Livermore & Richard L. Revesz, *Rethinking Health-Based Environmental Standards*, 89 N.Y.U. L. Rev. 1184, 1186–87 (2014)

("Environmental pollutants often lack ambient concentrations below which there is no risk of negative health consequences. As a result, the complete elimination of health risks for these pollutants could be accomplished only by banning all emissions."). In analyzing the Rule, EPA expressly disclaims the notion that the NAAQS are a zero-risk standard, stating, "It is important to emphasize that *NAAQS are not set at a level of zero risk.* While benefits occurring below the standard may be less certain than those occurring above the standard, EPA considers them to be legitimate components of the total benefits estimate." 77 Fed. Reg. 9304, 9431 (Feb. 16, 2012) (emphasis added); *see also* MATS RIA at ES-4 (same). In the Rule's economic analysis, EPA considered over a dozen peer-reviewed epidemiological studies and elicited expert input to estimate the health effects of particulate matter. MATS RIA at 5-26 to 5-27. The scientific literature and expert responses support using a no-threshold model, MATS RIA at 5-98; 77 Fed. Reg. at 9430, meaning that there is no concentration above zero (including concentrations below the NAAQS) for which health risks do not exist.

EPA developed its estimates of the benefits attributable to the Rule by focusing on the additional reductions in particulate matter that the Rule would achieve beyond the 2006 particulate matter NAAQS.[6]

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[6] As indicated above, EPA subsequently finalized new, more stringent particulate matter NAAQS. 78 Fed. Reg. 3086 (Jan. 15, 2013). As that standard's regulatory impact analysis indicates, substantial health benefits result from reducing particulate matter below even these latest, more stringent standards. *See* 2012 PM NAAQS RIA at ES-14 (projecting $6.7 billion to $20 billion more in total monetized net benefits if EPA had chosen a standard of 11 micrograms per cubic meter

As the regulatory impact analysis for the 2006 particulate matter NAAQS illustrates, significant health benefits will flow from the Rule's reductions in particulate matter below the NAAQS. In its 2006 rulemaking, EPA considered two alternative NAAQS levels: 14 or 15 micrograms of particulate matter per cubic meter. EPA, *Regulatory Impact Analysis for the Revised Particulate Matter National Ambient Air Quality Standards* at ES-7 (2006). EPA chose the 15 microgram option, but its cost-benefit analysis showed that the more stringent standard would have prevented an additional 1900 deaths, 3700 heart attacks, 5700 cases of acute bronchitis, 2000 emergency rooms visits by asthmatic children, and 200,000 lost work days. *Id.* at ES-8. These benefits, among others, would have produced $9–10 billion more in monetized net benefits than the standard EPA ultimately chose. *Id.* at ES-7. While EPA concluded that these incremental benefits were not "requisite to protect the public health," they are nonetheless substantial quantified benefits that cannot be ignored merely because they occur at ambient concentrations below the chosen NAAQS. For the same reason, EPA properly valued such benefits flowing from this Rule's particulate matter reductions beyond the NAAQS.

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instead of the 12 micrograms per cubic meter standard that was ultimately selected); Livermore & Revesz, *Rethinking Health-Based Environmental Standards*, *supra*. at 1244-45.

III. THE OFFICE OF INFORMATION AND REGULATORY AFFAIRS'S POSITIVE REVIEW OF THE RULE INDICATES THAT EPA CONSIDERED COSTS AND BENEFITS IN A REASONABLE MANNER

Executive branch agencies, including EPA, must conduct cost-benefit analyses for all significant rules and submit such rules to the Office of Information and Regulatory Affairs (OIRA), along with a regulatory impact analysis. Exec. Order No. 12,866 § 6(a)(3)(B), 58 Fed. Reg. at 51,741; Exec. Order No. 13,563 § 1(b), 76 Fed. Reg. at 3821; *see also* Circular A-4 at 1–3. The principal purpose of OIRA review is to ensure that a rule's benefits justify its costs. *See* Exec. Order No. 12,866 §§ 1(b)(5)–(6), 2(b), 58 Fed. Reg. at 51,736–37. In this case, OIRA's positive review of the Rule undermines Petitioners' claims that the rule's costs exceed its benefits.

Executive branch regulatory review has been a defining feature of U.S. administrative law for the past thirty years, during presidential administrations of both political parties. Exec. Order No. 12,291, 46 Fed. Reg. 13,193 (Feb. 17, 1981) (Reagan); Exec. Order No. 12,866, 58 Fed. Reg. at 51,735 (Clinton); Exec. Order No. 13,563, 76 Fed. Reg. at 3821 (Obama); *see also* Richard L. Revesz & Michael A. Livermore, *Retaking Rationality: How Cost-Benefit Analysis Can Better Protect the Environment and Our Health* 11 (2008); John D. Graham et al., *Managing the Regulatory State: The Experience of the Bush Administration*, 33 Fordham Urb. L.J. 953, 956 (2006) ("Virtually all scholarship on this subject acknowledges the increasing importance of OMB's role in regulatory policymaking over the past thirty years.").

When a rule's benefits do not justify its costs, OIRA can return a rule to the proposing agency for further review. Exec. Order No. 12,866 § 6(b)(3), 58 Fed. Reg. at 51,742; *see also* Letter from Susan E. Dudley, Adm'r, Office of Info. & Regulatory Affairs to Marcus C. Peacock, Deputy Adm'r, Envtl. Prot. Agency (July 3, 2008) (returning draft Pesticide Container Recycling rule for reconsideration because the quantified costs exceed the benefits by more than two orders of magnitude), *available at* http://www.reginfo.gov/public/return/Epa_Return_letter_7_03.pdf; Letter from Cass R. Sunstein, Adm'r, Office of Info. & Regulatory Affairs, to Lisa P. Jackson, Adm'r, Envtl. Prot. Agency (Sept. 2, 2011) (returning draft ozone NAAQS for reconsideration for several reasons, and citing the need to minimize regulatory costs and burdens), *available at* http://www.reginfo.gov/public/return/EPA_Return_Letter_9-2-2011.pdf.

Here, OIRA reviewed EPA's analysis, including the Rule's substantial indirect benefits, and allowed the agency to proceed, indicating that EPA considered costs and benefits in a reasonable manner. *See* Office of Info. & Regulatory Affairs, OIRA Conclusion of EO 12866 Regulatory Review, RIN 2060-AP52 (Dec. 16, 2011), *available at* http://www.reginfo.gov/public/do/eoDetails?rrid=121172. Agencies like EPA are acutely aware of the cost-benefit analysis requirements of Executive Orders 12,866 and 13,563. *See* EPA, *Guidelines for Preparing Economic Analyses*, *supra*, at 2-1 to 2-2, 10-3; *see also* Cass R. Sunstein, *The Office of Information and Regulatory Affairs: Myths and Realities*, 126 Harv. L. Rev. 1838, 1865 (2013). While EPA reasonably chose not to consider costs when deciding whether it was "appropriate and necessary"

to list power plants under Section 112(n)(1)(A), *see* Section IV, *infra*, EPA appropriately assessed both costs and benefits when setting emissions standards under Section 112(d) and submitted a regulatory impact analysis to OIRA, consistent with Executive Orders 12,866 and 13,563. The OIRA review process thus provided an additional check on the agency's rulemaking.

OIRA also assesses the possible effect of rules on other federal programs and coordinates interagency review by specialists from affected agencies. *See* Exec. Order No. 12,866 § 2(b), 58 Fed. Reg. at 51,737; Sunstein, *The Office of Information and Regulatory Affairs: Myths and Realities*, *supra*, at 1841 ("OIRA's goal is often to identify and convey interagency views and to seek a reasonable consensus, not to press its own positions."). Rules and their regulatory impact analyses are often modified through this interagency process. Cass R. Sunstein, *Simpler: The Future of Government* 180 (2013). Because agencies have different perspectives and expertise, coordination subjects the cost-benefit analysis to additional scrutiny. *See* Michael A. Livermore & Richard L. Revesz, *Regulatory Review, Capture, and Agency Inaction*, 101 Geo. L.J. 1337, 1368 (2013) ("[A]ny rules proposed by the EPA also will be examined by the Department of Energy, the Department of Transportation, and the Small Business Administration—agencies with which environmentalists are not thought to have overly close connections.").

Several agencies reviewed and suggested edits to the Rule and its economic analysis. *See, e.g.*, Summary of Interagency Working Comments on Draft Language under EO 12866 Interagency Review

11, Doc. No. EPA-HQ-OAR-2009-0234-2984 (Mar. 4, 2011) (suggesting, for example, that EPA should acknowledge the Federal Energy Regulatory Commission's energy forecasts). Meeting records confirm that OIRA met with the Small Business Administration, the National Economic Council, and representatives from the electricity generation industry, among others. *See* Office of Mgmt. & Budget, Meeting Record (Nov. 7, 2011), *available at* http://www.whitehouse.gov/omb/2060_meeting_11072011b; Office of Mgmt. & Budget, Meeting Record (Nov. 29. 2011), *available at* http://www.whitehouse.gov/omb/2060_meeting_11292011c. While Petitioners assert that the Rule shows an irrational approach to costs, the favorable OIRA and interagency review belies that characterization.

Legal scholars have argued that courts should take into account whether OIRA reviewed the agency's cost-benefit analysis when calibrating the level of judicial scrutiny of regulations. Catherine M. Sharkey, *State Farm "With Teeth": Heightened Judicial Review in the Absence of Executive Oversight*, 89 N.Y.U. L. Rev. 1589, 1592, 1619–20 (2014); *see also* Nina A. Mendelson & Jonathan B. Wiener, *Responding To Agency Avoidance of OIRA*, 37 Harv. J.L. & Pub. Pol'y 447, 519 (2014) (suggesting that favorable OIRA review could provide evidence, or a presumption, that the agency action is not "arbitrary" under the Administrative Procedure Act). Similarly, Justice Breyer, in his academic writing, recognized the connection between executive review and judicial review. Stephen Breyer, *Breaking the Vicious Circle: Toward Effective Risk Regulation* 80 (1993) ("[T]he judicial tendency to review less closely than in the past agency policy determinations for reasonableness argues for some

such centralized reviewing capacity, perhaps within the Executive Branch itself."). Agencies and OIRA have the technical expertise to conduct and review cost-benefit analyses; when courts can refer to such analysis and executive branch review, there is less need to second-guess the agency's analytical process.

In short, the interagency review process and OIRA's approval of the Rule and its regulatory impact analysis strongly support a finding that EPA's approach was reasonable.

IV. EPA'S DECISION NOT TO BASE THE SECTION 112(n)(1)(A) LISTING ON COST CONSIDERATIONS WARRANTS PARTICULAR DEFERENCE

This case turns not on *whether* the costs of regulating hazardous emissions from power plants should be considered, but on *when* such costs should be considered: upon listing the source category under Section 112(n)(1)(A), 42 U.S.C. § 7412(n)(1)(A), or only afterward when setting the standards' stringency under Section 112(d), 42 U.S.C. § 7412(d). EPA's interpretation that Section 112(n)(1)(A)'s silence on costs does *not require* that costs must be taken into account warrants, at minimum, this Court's standard *Chevron* deference. *See Chevron U.S.A. Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 842–45 (1984). Moreover, this Court should grant EPA additional deference on interpreting the criteria for listing decisions, given that Congress, in Section 112(d), explicitly balanced cost considerations against air quality goals when it prescribed the criteria that EPA must use to set the stringency of standards for listed source categories. The Court should also afford EPA particular deference in light of the agency's consistent

interpretation, over more than two decades, under administrations of both political parties, that category-listing decisions do not require the consideration of costs. Finally, prematurely assessing costs at the listing stage under Section 112(n)(1)(A) would be impossible or grossly misleading, because subsequent regulatory choices under Section 112(d) could dramatically affect the magnitude of costs.

A. This Court Consistently Affords Agencies Discretion on Whether to Consider Costs When the Statutory Text Is Silent or Ambiguous

This Court recognizes that Congress generally entrusts the questions of whether and how to weigh regulatory costs to the sound discretion of agencies. For example, in *EPA v. EME Homer City Generation, L.P.*, this Court upheld EPA's approach to the "consideration of costs" as a "reasonable interpretation of an ambiguous Clean Air Act provision." 134 S. Ct. 1584, 1593 (2014). Similarly, in *Entergy Corp. v. Riverkeeper, Inc.*, the Court stated: "It is eminently reasonable to conclude that [statutory] silence is meant to convey nothing more than a refusal to tie the agency's hands as to whether cost-benefit analysis should be used " 556 U.S. 208, 222 (2009). *See also Am. Textile Mfrs. Inst., Inc. v. Donovan*, 452 U.S. 490, 508–13 (1981) (confirming the agency's interpretation of "reasonably necessary or appropriate" and "to the extent feasible" as not requiring cost-benefit analysis).

Indeed, this Court has never struck down an agency's interpretation of ambiguous statutory language by affirmatively *requiring* the agency to consider costs. In fact, in the one case when this

Court did not give EPA *Chevron* deference on this type of question, it held that Section 109 of the Clean Air Act *precluded* cost considerations. *Whitman*, 531 U.S. at 465–71. When, as in Section 112(n)(1)(A), the statutory text is silent on whether costs should be considered, EPA's reasonable approach to considering costs in a multi-step regulatory process should receive deference.

B. EPA's Approach to Listing Categories Is on Especially Strong Footing Because Section 112(d) Sets Standards According to a Deliberate Balancing of Costs and Air Quality Goals

When Congress specifies how costs must be considered in determining the stringency of regulatory standards for source categories, but declines to prescribe whether costs should be considered in the threshold decision whether to regulate a source category, courts should afford an agency particular deference in choosing not to base category listings on costs. In *Whitman*, this Court "refused to find implicit in ambiguous sections of the [Clean Air Act] an authorization to consider costs that has elsewhere, and so often, been expressly granted." 531 U.S. at 467. Here, Section 112(n)(1)(A) instructs EPA, without any explicit reference to costs, to make the threshold determination whether listing power plants as a category subject to regulation is "appropriate and necessary." Once a category is listed, the Clean Air Act instructs EPA to select the more stringent of two main pathways for calibrating the "maximum degree of [emissions] reduction achievable" for that category. 42 U.S.C.

§ 7412(d)(2)–(3). [7] Both options for developing emissions standards under Section 112(d) reflect Congress's deliberate balancing of costs against air quality goals. Consequently, EPA's decision not to consider costs during its threshold listing determination under Section 112(n)(1)(A)'s ambiguous criteria warrants particular deference.

Of EPA's two main options for calibrating regulatory standards, the first, Section 112(d)(2), is explicitly based on cost considerations. Using phrasings found in numerous environmental statutory provisions that require cost analysis—*e.g.*, 33 U.S.C. §§ 1314(b)(2)(B), 1316(b)(1)(B); 42 U.S.C. §§ 7411(a)(1), 7479(3), 7521(a)(3)(A), 7545(k)(1)(A)—Section 112(d)(2) instructs EPA to promulgate standards requiring the maximum emissions reductions that are "achievable" after "taking into consideration the cost." 42 U.S.C. § 7412(d)(2). Even without explicit instructions to take costs into account, the word "achievable" alone would lead to a cost-conscious standard, because it implies that a certain proportion of industry sources could achieve that performance under real-world, "adverse" market conditions, and do so "presumably in a cost efficient manner." *White Stallion Energy Ctr., LLC v. EPA*, 748 F.3d 1222, 1239, 1251 (D.C. Cir. 2014) (citing *Nat'l Lime Ass'n v. EPA*, 627 F.2d 416, 431 n.46 (D.C. Cir. 1980)); *see also* S. Rep. No. 101-288, at 168–69 (1989) ("Cost considerations are reflected in the selection of emissions limitations which have been achieved in practice . ").

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[7] EPA describes the Section 112(d)(3) standard as the "floor" and the Section 112(d)(2) standard as "beyond the floor." That is just a different way of saying that EPA must choose the more stringent of the two standards.

The second option, Section 112(d)(3), similarly uses an achievability benchmark to consider costs. Congress specifies that EPA should set Section 112(d)(3) standards according to either the performance "achieved in practice by the best controlled similar source" or, for existing sources, "the average emission limitation achieved by the best performing [12 percent of existing sources or 5 individual sources, depending on the category's size]." 42 U.S.C. § 7412(d)(3). Contrary to Petitioner's assertion that Section 112(d)(3) represents a cost-indifferent standard, State Pet'rs Br. at 45–46, the provision implicitly reflects cost considerations through these achievability benchmarks. Indeed, EPA chose its words carefully when it explained that Section 112(d)(3) does not let *the agency* consider costs in setting standards, 77 Fed. Reg. at 9307, because *Congress* already integrated cost considerations into the standard, by referencing the best performance that sources could achieve while remaining financially viable. *Cf.* Industry Resp'ts Br. at 29 ("That so many [existing coal-fired] plants have installed the necessary controls—and have remained in business despite the cost advantage that polluting plants enjoy—completely undercuts the notion that the Rule will financially ruin the industry.").

The view that both Sections 112(d)(2) and 112(d)(3) reflect cost considerations is consistent with the Clean Air Act's overarching goals.[8] The

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[8] A few alternate options for setting standards reinforce Section 112(d)'s attention to costs. For example, Section 112(d)(4) allows EPA to avoid setting regulatory stringency beyond a "health threshold"—a statutory precaution against imposing regulatory costs that deliver truly zero health benefits. Of course, EPA declined to use this provision in the MATS Rule, as

1990 amendments to Section 112 were largely a congressional response to severe regulatory inaction in combating hazardous pollution during the previous decades, due to EPA's concerns that its statutory mandate required aggressively stringent and costly limits of zero exposure. In revising Section 112(d), Congress deliberately struck a balance intended to assuage EPA's fear of imposing "standards so stringent [that] they would shut down . American industry," S. Rep. No. 101-228, at 128 (1989), while still making substantial progress in addressing the acute health dangers of mercury and other hazardous emissions. *See id.* at 154–55 (discussing health effects of mercury and legislative plan to regulate those emissions); H. Rep. No. 101-490, at 319–20 (1990) (same). To the extent that Section 112(d)(3) may bind EPA to standards more stringent than those the agency would set under Section 112(d)(2), that is by congressional design, reflecting a desire to advance air quality goals and avoid bureaucratic delay and timidity. *See also* Non-Gov't Resp'ts Br. at 28–29.

C. For over Twenty Years, Under Administrations of Both Political Parties, EPA Has Consistently Interpreted Category-Listing Decisions Not to Require Cost Analysis

Since 1992, just after Congress revised Section 112 to its current form, EPA has consistently interpreted Section 112 as not requiring cost considerations during category-listing decisions. This Court has repeatedly recognized the importance of

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that Rule will deliver up to $90 billion in annual health and welfare benefits, *see supra* at 6.

"accord[ing] particular deference to an agency interpretation of longstanding duration." *Alaska Dep't of Envtl. Conservation v. EPA*, 540 U.S. 461, 487 (2004) (internal quotation omitted); *see also Entergy Corp. v. Riverkeeper, Inc.*, 556 U.S. 208, 224 (2009) (explaining that EPA's consistent interpretation of a statutory provision for over three decades, "[w]hile not conclusive, surely tends to show that the EPA's current practice is a reasonable and hence legitimate exercise of its discretion"). EPA's long history of consistent regulatory interpretation of Section 112 similarly warrants "particular deference."

In 1992, EPA under President George H.W. Bush published the "Initial List of Categories of Sources under Section 112(c)(1) of the Clean Air Act Amendments of 1990." 57 Fed. Reg. 31,576 (July 16, 1992). The criteria for listing categories of "area sources" under Section 112(c)(3) ("present[ing] a threat of adverse effects to human health or the environment warranting regulation under this section") are quite similar to the criteria for listing power plants under Section 112(n)(1)(A) ("appropriate and necessary after considering the results" of a "study of the hazards to public health reasonably anticipated to occur"). In 1992, industry commenters asked EPA to establish a "*de minimis* emission cutoff" for listing area sources, to protect "industry and Agency resources"—in other words, to account for costs during the listing determination. 57 Fed. Reg. at 31,582. EPA declined and responded that it would instead exercise its "discretion, when establishing standards under section 112(d)(2) [to] consider costs." *Id.* at 31,582–83.

During the Clinton administration in 2000, EPA made the first "appropriate and necessary" finding under Section 112(n)(1)(A) and listed power plants under Section 112(c). 65 Fed. Reg. 79,825, 79,830 (Dec. 20, 2000). The finding did not reference any cost considerations, and the notice explained that listing power plants as a category "does not impose regulatory requirements or costs." *Id.* at 79,831. Rather, the notice announced that "[a]s a part of developing a regulation [under Section 112(d)], the effectiveness and costs of controls will be examined." *Id.* at 79,830.

Though under President George W. Bush, EPA attempted in 2005 to reverse that earlier finding and asserted that costs "*might*" be a factor under Section 112(n)(1)(A), 70 Fed. Reg. 15,994, 16,000–01 (Mar. 29, 2005) (emphasis added), EPA never found that the statute *required* cost analysis. By contrast, EPA emphatically declared that Section 112(n)(1)(A)'s "paramount factor *is* whether the level of utility HAP emissions remaining would result in hazards to public health." *Id.* at 16,000 (emphasis added). More generally, the 2005 revised finding confirmed that the "appropriate and necessary" determination undisputedly "entrust[s] EPA to exercise judgment," *id.* at 16,001, and that the "appropriate and necessary" finding is preliminary and "is not setting emissions standards." *Id.* at n.19 (contrasting "setting emissions standards" to the appropriate and necessary determination).

EPA has a similarly long history under analogous Clean Air Act provisions, of first listing source categories without necessarily considering costs, but subsequently assessing costs as required when designing regulatory standards. For example, under

Section 111, EPA first must "list categories of stationary sources [that] cause[ ], or contribute[ ] significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare." 42 U.S.C. § 7411(b)(1)(A). After listing categories, EPA then proposes "standards of performance," 42 U.S.C. § 7411(b)(1)(B), which must "tak[e] into account the cost of achieving such reduction." 42 U.S.C. § 7411(a)(1). Partly because Congress instructs EPA to consider costs when developing Section 111 performance standards, the agency does not consider costs when listing source categories. *E.g.*, 74 Fed. Reg. 51,950, 51,957 (Oct. 8, 2009) (distinguishing between "the initial endangerment finding" and "the time [when] performance standards are promulgated," and explaining that the latter phase is when EPA may "exercise its discretion" on the scope of regulation, for example by deferring regulation of specific pollutants because controls are not technologically or economically available); *see also* 44 Fed. Reg. 49,222, 49,225 (Aug. 21, 1979) ("The Clean Air Act [Section 111] priority list criteria do not include the cost of pollution control, but costs must be considered in determining each [performance standard].").

Similarly, under Section 202 of the Clean Air Act, EPA first makes an endangerment finding with respect to air pollution from motor vehicles, 42 U.S.C. § 7521(a)(1), and subsequently develops emissions standards after "giving appropriate consideration to the cost of compliance." 42 U.S.C. § 7521(a)(2). In 2009, EPA issued an endangerment finding for greenhouse gas emissions from motor vehicles, explicitly choosing not to consider regulatory costs or to propose emissions standards at the same time. 74 Fed. Reg. 66,496, 66,509 (Dec. 15,

2009) ("[T]he issues of risk of harm and severity of harm if it were to occur are separate from the issues of the economic impacts of any resulting regulatory provisions."). The D.C. Circuit upheld this independent, cost-blind endangerment finding, confirming EPA's view that "questions about the cost of compliance are not part of the § 202(a)(1) endangerment inquiry." *Coal. for Responsible Regulation, Inc. v. EPA*, 684 F.3d 102, 118 (D.C. Cir. 2012), *limited cert. granted only on a non-endangerment question*, 134 S.Ct. 418, *aff'd in part, rev'd on other grounds by Util. Air Regulatory Group v. EPA*, 134 S.Ct. 2427 (2014). Following the endangerment finding, when EPA subsequently set the stringency of emissions standards for motor vehicles, it considered costs. 75 Fed. Reg. 25,324, 25,342 (May 7, 2010).

Under both Section 112 and other provisions of the Clean Air Act, and during administrations of both political parties, EPA has consistently interpreted category-listing decisions not to require cost analysis. This long regulatory history supports giving additional deference to EPA's decision not to take costs into account under Section 112(n)(1)(A).

D. Premature Cost Assessment Could Be Impossible or Misleading, Because Costs Depend on Regulatory Choices That EPA Can Make Only After an Initial Listing Decision

EPA cannot meaningfully predict potential costs before making at least some fundamental choices among distinct regulatory alternatives. Numerous choices can significantly decrease or increase regulatory costs, including a regulation's proposed scope, stringency, design, use of flexible compliance

options, compliance schedules, and approach toward different segments of the regulated industry. *See* Circular A-4 at 7–9. It is no accident that Circular A-4 instructs agencies first to develop regulatory alternatives, and only then to assess costs and benefits. *Id.* at 2 (describing the steps of regulatory impact analysis as "(1) a statement of the need (2) an examination of alternative approaches, and (3) an evaluation of the benefits and costs—quantitative and qualitative—of the proposed action and the main alternatives identified.").

Many cost-determinative choices among alternatives were not or could not be made at the time of EPA's "appropriate and necessary" finding under Section 112(n)(1)(A). For example, subcategorization decisions can decrease or increase costs substantially, especially because under Section 112(d)(3), the stringency of emissions standards is determined by the performance achieved by the cleanest sources only *within a particular subcategory*. Indeed, the extensive bickering preceding the final Rule over the particular definition of subcategories, *see* 77 Fed. Reg. at 9378–79, underscores the importance of subcategorization. Though EPA exempted natural gas power plants from its "appropriate and necessary" finding, Section 112(n)(1)(A)'s listing decision generally must be made for "electric utility steam generating units" as a group, and does not contemplate subcategorization. 42 U.S.C. § 7412(n)(1)(A). Instead, EPA's "broad" (though not unlimited) subcategorization authority is found in Section 112(c). *See NRDC v. EPA*, 489 F.3d 1364, 1372 (D.C. Cir. 2007). Section 112(c) requires that EPA list subcategories to be consistent with Section 111's subcategories, "[t]o the extent practicable." 42 U.S.C. § 7412(c)(1). Because EPA

could only subcategorize electric utility steam generating units under the authority of Section 112(c), and only upon analysis of consistency with Section 111 regulations, EPA could not logically predict precise subcategories at the time of the "appropriate and necessary" review, and therefore could not reasonably predict regulatory costs. For that reason, in 2000, when EPA first made its cost-blind "appropriate and necessary" finding under Section 112(n)(1)(A), the agency explained, "The listing of source categories under Section 112(c) is a dynamic process. Decisions as to the scope of source categories listed will be perfected during the course of the rulemaking process and will take account of improvements in available information and analysis " 65 Fed. Reg. at 79,826. Petitioners' reading of Section 112 would force EPA to complete such analysis and predict precise subcategories before making the "appropriate and necessary" finding, effectively jumbling the order of a multi-step decisionmaking process designed by Congress, and "put[ting] the cart before the horse." *See* Industry Resp'ts Br. at 24–25.

Petitioners offer no reasonable methodology for calculating costs at the Section 112(n)(1)(A) listing phase, before many important, cost-determinative regulatory choices like subcategorization have been made under Sections 112(c) and (d). Implicitly, Petitioners want to force EPA to assume that, since emissions standards must be at least as stringent as the performance achieved by the cleanest 12% of existing sources, minimum compliance costs for such standards could be calculated. But to do so would require figuring out the denominator used to calculate the 12%, which is a function of subcategorization.

Calculating costs at the listing stage would also be misleading because the more stringent option is not necessarily the more costly. In setting standards under Section 112(d), EPA must select the more stringent option between Section 112(d)(2) and (d)(3). The language of Section 112(d)(2), however, potentially allows for greater use of flexible compliance tools than the language of (d)(3). Specifically, Section 112(d)(2) permits EPA to apply any "measures, processes, methods, systems, or techniques," whereas Section 112(d)(3) assumes application of the best "emission control that is achieved in practice." *Compare* 42 U.S.C. § 7412(d)(2), *with* § 7412(d)(3). In 2000 and again in 2004, EPA discussed the potential to use nontraditional methods like demand-side management or economic incentives like emissions trading to implement Section 112 regulation. *See* 65 Fed. Reg. at 79,828–30; 69 Fed. Reg. 4652, 4661 (Jan. 30, 2004). Both economic experts and EPA's own regulatory experience have demonstrated that flexible compliance tools can achieve more ambitious environmental goals at greatly reduced costs. *See* 69 Fed. Reg. at 4701 (explaining that the Clean Air Act's 1990 program on acid rain, "a market-based cap-and-trade approach," is "widely acknowledged as a model air pollution control program because it provides significant and measurable environmental and human health benefits with low implementation costs"); Dallas Burtraw & Erin Mansur, *The Effects of Trading and Banking in the SO_2 Allowance Market* 20 (Res. for the Future, Disc. Paper 99-25, 1999), http://www.rff.org/documents/RFF-DP-99-25.pdf ("[O]verall emission reductions might not otherwise have been achieved, absent the opportunity to bank and to trade allowances. The

flexibility in compliance that is afforded by these aspects of the program led to significant decreases in the cost of the program and made the program economically affordable and politically acceptable."). Consequently, EPA could set a flexible standard under 112(d)(2) that required greater pollution reductions than a standard under 112(d)(3), but would nevertheless be less costly. In short, before completing the full analysis required by Section 112(d)(2) of all achievable "measures, processes, methods, systems, or techniques," including flexible compliance options, as well as their "costs," their "non-air quality health and environmental impacts," and their "energy requirements," 42 U.S.C. § 7412(d)(2), EPA could not make any reliable cost predictions.

Several other examples confirm that costs will depend heavily on regulatory choices made after the completion of the Section 112(n)(1)(A) listing. For example, compliance schedules can alter costs greatly, but must be set "as expeditiously as practicable" under criteria specified by Section 112(i)(3). Similarly, work practice standards are typically less costly, but the appropriateness of such options must be assessed under Section 112(h). *See also* Industry Resp'ts Br. at 25–27 (detailing the many ways that EPA accommodated costs through regulatory decisions made after the initial listing determination). Consequently, instead of basing its listing decision on costs, EPA properly chose to assess costs later, after identifying the regulatory alternatives available under the authority of Section 112(d) and other such provisions.

Because any premature attempt to predict costs in the context of the Section 112(n)(1)(A)

determination alone could have been grossly misleading—if not practically impossible—EPA's choice not to base its "appropriate and necessary" finding on costs was reasonable and deserves deference.

CONCLUSION

For the foregoing reasons, this Court should affirm the judgment of the court of appeals.

Respectfully submitted,

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